Saskatchewan
Labour

# Occupational Health & Safety

# The Farm Safety Guide

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## About this publication

You will find this publication useful if you operate a farm or a ranch as a business. The Farm Safety Guide is about management practices that will help ensure the health and safety of everyone on your farm.

The Guide provides:

- A 10-element program to help you protect your employees, your family and yourself from injuries and illness on your farm
- Information on how the occupational health and safety legislation applies to farms and ranches, and
- Reference to publications and websites that can help you develop your farm safety program

If you have a specific question or concern about safety and health on your farm that is not covered in the Farm Safety Guide, you can contact:

Saskatchewan Labour
Occupational Health & Safety Division
1870 Albert St., 6th Floor
Regina, SK S4P 3V7

Telephone: (306)787-4496
Toll Free Number: 1-800-567-7233
Website: www.labour.gov.sk.ca
www.worksafesask.ca

The Farm Safety Guide does not replace the Act and regulations. You need to refer to the legislation to find out the exact requirements that apply to your farm business. To order a copy, contact:

The Office of the Queen's Printer
1st Floor, 1871 Smith St.
Regina, SK S4P 3V7

Telephone: (306)787-6894
Toll Free Number: 1-800-226-7302
Fax: (306)787-9779
Website: www.qp.gov.sk.ca

*Freelaw* (www.qp.gov.sk.ca/) provides access to up-to-date electronic versions of all Government of Saskatchewan Acts and Regulations (downloadable in Portable Document Format).

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# Introduction

Factors beyond the control of most farmers have radically altered the face of Saskatchewan farming over the last few decades. Grain handling costs, equipment prices, and the development of corporate farms challenge the survival of the family run farm. The necessity to run the farm as a competitive business is part of this challenge.

From time to time, as a farmer, you will probably hire others to help run your farm operation. The farm is no longer just a "family farm". It is a business enterprise involving "employer-employee" relationships. As the employer, you are responsible for knowing and applying the laws that ensure the health and safety of all people working on your farm. Just as you need to know the ins and outs of crop management, you also need to know what is required by Saskatchewan's occupational health and safety legislation. Using the legislation as a farm management tool can help you farm more safely and more profitably.

## *Injuries in agriculture*

Agriculture is one of Saskatchewan's largest and most hazardous industries. All farms have dangerous machinery and work situations. People of all ages, who work and live on farms, are at risk of injury. Data collected by the Institute of Agricultural Rural and Environmental Health (IAREH) at the University of Saskatchewan identified 147 farm-related fatalities and 2,293 farm-related injuries for the period 1990 to 1996. Saskatchewan had 14.5% of all farm deaths in Canada for this period. About one in five people who died in farm accidents were under 19 years of age.

Many factors can contribute to farm accidents. Young, inexperienced workers, who make up much of the casual labour force, have more accidents than older, more experienced workers. Children are exposed to hazards on farms because it is their home, as well as, a place of work. Older farmers often experience performance changes that occur with aging, for example, reduced balance and reaction time, vision and hearing impairment. These and other changes affect their ability to work safely. Working alone and under time pressure to get things done also increases the risk of accident and injury. When these occur, especially at critical farming times, they can reduce farm revenues. Losing a limb and the resulting loss of productive work time can devastate both the short and the long-term profitability of a farm operation.

*The Occupational Health & Safety Act, 1993* and *The Occupational Health & Safety Regulations, 1996* (sometimes referred to as OH&S legislation in this guide) apply to all workplaces, including farms. The purpose of this guide is to provide some tools that can help you manage health and safety on your farm and meet your legal obligations.

This guide shows how you can develop and maintain a healthy and safe farm workplace for your workers, your family and yourself. The 10 elements that follow will help you manage health and safety on your farm. You can adapt them to suit the particular needs of your farm.

## Make farms a safer place to work and live

The 10 elements of a plan for a safe and healthy workplace are:

*Element 1:* Demonstrate commitment to keeping your farm healthy and safe

*Element 2:* Involve your workers

*Element 3:* Train workers and supervisors

*Element 4:* Assign responsibilities

*Element 5:* Inspect your farm

*Element 6:* Identify and control hazards

*Element 7:* Control chemical hazards and biohazards

*Element 8:* Prepare for farm emergencies

*Element 9:* Investigate accidents and near accidents

*Element 10:* Make your farm a healthier and safer workplace

Each of these elements is explained in the following pages. These 10 elements are the basis of a solid safety plan. They are also supported by OH&S legislation.

## Who's responsible for health and safety?

In Saskatchewan, *everyone in a workplace is responsible for:*

- preventing injuries and illness, and
- creating a healthy and safe workplace and keeping it that way

This includes employers, supervisors and workers, contractors, owners, suppliers and self-employed persons including farmers. Everyone in the workplace has a responsibility to work together co-operatively to prevent occupational injuries and illnesses. This is the basis of the *Internal Responsibility System (IRS)* for occupational health and safety.

The more authority people have, the more responsibility they have. For example, a self-employed farmer has the most authority in his workplace and the greatest responsibility for keeping his workplace healthy and safe.

The goal of a good safety program is to get people working together to identify and control situations (hazards) that could cause harm. Everyone in the workplace must be involved and know their responsibilities. They must co-operate with each other and share information about health and safety. Finally, each person must be accountable for carrying out his/her responsibilities.

Workers have three basic rights that help them carry out their responsibilities for safety:

- Workers have the *right to know* about the hazards of their jobs. They should know how to recognize and deal with those hazards so they won't cause injury or health problems to themselves or to others in the workplace.
- Workers have the *right to participate* in health and safety in the workplace. Employers should consult with them on matters that affect workers' safety.
- Workers have the *right to refuse* work that they believe to be unusually dangerous to themselves and/or others in the workplace.

## What legislation applies to farms?

The OH&S legislation gives direction on how, as a farmer, you should protect those who work with you and for you on your farm. Workers also have responsibilities to protect their own health and safety and that of other people affected by their actions. The OH&S legislation gives workers direction on how to meet their responsibilities.

The OH&S legislation provides the following definitions:

- **Employer:** a person, firm, association or body that has one or more persons in its service in connection with the workplace. Farmers can be employers.
- **Worker:** a person engaged in an occupation in the service of an employer.
- **Contractor:** a person who hires an outside company or a self-employed person on a contract and directs their activities. In this definition, farmers can be contractors.
- **Self-employed person:** a person who is engaged in an occupation but is not in the service of an employer. Farmers can be self-employed persons.

In order to protect others, *you are required to think ahead about possible hazards and do everything reasonably practicable to prevent accidents on your farm.* This is called "due diligence".

## What is due diligence?

Due diligence means, anyone with responsibilities for health and safety must "...take every precaution reasonable in the circumstances to avoid a work related injury or illness". This concept of "reasonable care" holds individuals accountable for their acts and omissions. It goes beyond simple "regulatory compliance". Due diligence includes the following concepts:

- **Reasonably practicable** – A high standard where a person is doing his or her best job, acting with common sense and taking reasonable care.
- **Degree of risk** – The approach required depends on the degree of risk. The higher the risk, the greater the safety measures that must be taken.

The criteria for due diligence requires each person with responsibilities:

- **To establish a plan** – Identify the hazards present and assess their risks. Then develop a plan to manage those risks. The plan should reduce the likelihood of the identified hazards causing harm.
- **To ensure the plan is adequate** – The plan must meet the needs of the workplace and the workers. The plan can be measured against industry standards.
- **To monitor and evaluate the plan's effectiveness** – A system must exist to allow competent staff to regularly monitor the effectiveness of the plan to ensure its requirements are met.

Farms are covered under *The Occupational Health and Safety Act (1993) and Regulations (1996)*. Most employers in Saskatchewan are automatically covered by *The Workers' Compensation Act (1979)*. Farmers and farm workers are not; instead, coverage is optional and an application must be made. Farmers who get workers' compensation coverage are entitled to benefits such as:

- Disability insurance for work-related injuries
- Wage loss benefits
- Lump sum payments if permanently impaired, and
- Freedom from legal action by an injured employee

For more information contact:

Saskatchewan Workers' Compensation Board
Head Office
200-1881 Scarth St. (306) 787-9516
Regina, SK S4P 4L1 1-800-667-7580 (toll free)

129 - 3rd Ave. North
Saskatoon, SK S7K 2H6 (306) 933-6312

# 10 Elements of a Health and Safety Plan

## *Element 1: Demonstrate commitment to keeping your farm healthy and safe*

You need a simple, concrete way of showing people who work on your farm that you're serious about health and safety. Demonstrate your commitment to health and safety through action and what you say. Here are some ideas:

- **Put your commitment to health and safety in writing:** Write down your intention to keep your farm healthy and safe and share it with everyone on the farm. Post it in a place where your workers can see it.

- **Set a Good Example:** Take the time to figure out how to do each job safely, and then make sure you do each job safely.

- **Clear Expectations:** Explain to workers or contractors, before you hire them, exactly what you expect in terms of health and safety. If you have a contract, put your expectations in writing. Make sure they know that they're responsible for doing the job safely and also doing it well. Insist that they follow all the legislation that applies to them. If someone is not meeting your expectations for health and safety, take steps immediately to correct the problem.

- **Open Communication:** Discuss health and safety with everyone regularly. Encourage and provide feedback on safety issues and performance. Show that you take safety concerns seriously. Reach an understanding about how hazardous jobs can be done safely. This will eliminate as much risk as possible before the worker starts the job.

- **Immediate Action:** Closely monitor the workplace for concerns about safety. Deal with your concerns and those of others immediately. Train and retrain your workers as soon as the need arises. Never take health and safety for granted.

Your family members will also benefit from these tips. Your family will be more safety conscious when you provide and explain health and safety information on a regular basis.

## *Element 2: Involve your workers*

Involve your workers and family members in managing safety on the farm. Workers and those who live on the farm often have direct knowledge (if not direct experience) of the range of workplace hazards present.

Always take seriously the issues workers raise about health and safety. If your workers know that you value their opinions and ideas, they're more likely to be involved in health and safety on-the-farm. Their involvement will pay off for you with fewer accidents and injuries, and less money spent on needless repairs to equipment and training new workers who replace those who've been injured.

Have talks about health and safety with your workers on a regular basis. Encourage workers to give you their ideas on safety matters affecting the work; give them your ideas on safety and their performance as safe workers. Discuss the hazards of tasks before workers do them. To eliminate as much risk as possible, make sure you and your workers agree on the safest way of doing all hazardous jobs before workers start on those jobs.

Workers will invest in farm health and safety if they have the opportunity:

- To raise questions about health and safety as they come up
- To discuss their safety concerns and receive support in finding solutions
- To discuss accidents and near-accidents
- To conduct safety inspections with you
- To do pre-operational checks on tools, machines and equipment before they begin work
- To read tool and equipment manuals and explain safe procedures to you or other workers, and
- To take safety training and help apply it on the farm

## Element 3: Train workers and supervisors

### *Hiring Tips*

Hire workers and supervisors who can work safely. Ask them to discuss their previous training and work experience. Check their references to see if they have a positive safety record in their previous jobs. Ask them to demonstrate that they can safely complete hazardous tasks. Ensure that they don't get into trouble during the demonstration.

### *Responsibility for Training*

OH&S legislation requires that employers arrange the training necessary to protect their workers' health and safety. New and transferred in employees should start with a thorough workplace safety orientation, which includes hazard identification and how to control hazards. Information on how to orient and train new workers is provided in *Health and Safety Orientations, A Guide for Employers*, a Saskatchewan Labour publication.

### *Training*

Plan for a safe work environment by ensuring that employees have suitable work skills and knowledge. Explain your commitment to safety when you hire and orient workers, and use these times to find out what training your employees need. Make sure you train them in the skills they need to deal with hazardous situations. Make it clear that they shouldn't do a job unless they know how to do it safely. This will encourage everyone to seek assistance before they tackle unfamiliar or hazardous tasks.

Training is more than providing information. Successful training requires a demonstration that the worker has acquired the required knowledge or skills – that s/he can do the job safely. It's your responsibility to teach safe work practices and procedures for all the jobs an employee or family member will do.

Key elements of this training include:

- How to do the tasks safely
- Hazard identification and control
- Legislative requirements of a worker's job
- Rights and responsibilities of workers
- What to do with concerns
- Who to ask for help
- Where to go for first aid
- Emergency preparation plans
- What to do if there's an accident

## *Element 4: Assign responsibilities*

Safety is enhanced when everyone participating in the workplace knows their own and others' responsibilities for health and safety.

### *Assigning Responsibility*

A good starting point is learning your own responsibilities as the employer. OH&S legislation requires that you, as the employer, ensure that everyone else knows their responsibilities for safety and how to act on them. Assigning clear and specific safety responsibilities to supervisors and workers is the next step. Checking often to see that each person is carrying out his or her responsibilities properly is good safety and management practice. If someone is not meeting your expectations for health and safety, take steps to correct the problem.

The duties of **farm employers and owners** include:

- Knowing and following health and safety requirements
- Providing a healthy and safe workplace
- Providing and maintaining safe buildings, machinery, tools and equipment
- Ensuring that employees operating powered mobile equipment or working in confined spaces are 16 years or older
- Establishing and implementing an effective health and safety management system
- Providing close supervision and ensuring clear lines of authority
- Making sure supervisors are trained, supported and held accountable for meeting their health and safety obligations
- Informing employees of existing hazards and training them to recognize other hazards
- Making sure employees have the information, training, experience and supervision needed to do their job safely
- Providing their employees with appropriate personal protective equipment (PPE) and showing them how to use and maintain it properly
- Ensuring that traffic routes, entrances and exits to your buildings, confined spaces and other work areas are safe
- Safely handling, transporting and storing hazardous products such as chemicals, fuel, etc., and
- Making sure adequate first aid facilities are provided

The duties of **supervisors** include:

- Understanding and ensuring that workplace health and safety requirements are met
- Making sure hazards are identified and proper steps are taken to control risks
- Inspecting work areas and correcting unsafe conditions or unsafe acts before they lead to an accident
- Making sure workers are properly trained and that they follow safe work procedures, and
- Understanding and implementing emergency procedures

The duties of **workers** include:

- Understanding and obeying health and safety legislation and specific workplace health and safety requirements (such as operating tractors safely)
- Following safe work procedures
- Using safety equipment, machine guards, safety devices, and personal protective equipment
- Reporting unsafe acts and workplace hazards, accidents, near accidents, injuries and illness immediately
- Working and acting safely and helping others to work and act safely, and
- Co-operating with others on health and safety issues

***Responsibilities when Contracting Work***

If you're a *farmer* and you hire an outside company or a self-employed person on a contract and direct their activities, then you become a *contractor* under Saskatchewan's OH&S legislation. Common examples of contracted work on Saskatchewan farms include custom spraying harvesting, installing grain bins, electrical work and welding.

As a contractor you have some additional responsibilities that include:

- Setting up a system of shared responsibilities and determining 'who is responsible for what' in relation to the health and safety of all workers in the workplace
- Controlling any health and safety hazards over which you – as the contractor have complete and direct control – that could affect the *subcontractor* (keep in mind that the subcontractor is responsible for controlling hazards within his/her direct and complete control)
- Co-operating with subcontractors to control health and safety hazards that are not within your direct and complete control as the contractor
- Coordinating the health and safety activities and responsibilities of two or more subcontractors on your farm
- Providing subcontractors with any relevant information you have that could affect their health and safety, or anyone else's health and safety
- Making sure subcontractors understand who is responsible for the health and safety activities that affect them, and
- Monitoring subcontractors to ensure they comply with the workplace health and safety requirements, and taking action to correct any non-compliance

### *Responsibilities of Suppliers*

The duties of **suppliers** include:

- Supplying products that are safe when used according to instructions
- Providing instructions for the safe assembly, use, and disassembly of products they supply (sell, rent, or lease), and
- Making sure that products comply with the legislation

### Employers' Responsibilities in Relation to Supplier Products

As an employer you have responsibility for how you deal with the products obtained for use in the workplace. Ensure that you read, understand and follow instructions for the assembly, use, disassembly and storage of all products. You are responsible for communicating this information to your workers.

If you, the employer, acquire a controlled product (hazardous substance) from a supplier to use on your farm, you should obtain a Material Safety Data Sheet (MSDS) on that product (See OH&S Regulation 325 for more information.). Also, ask for MSDSs for exempt products such as pesticides. Make sure you train anyone who could contact hazardous substances to protect him or herself. Closely supervise workers who work with dangerous substances to ensure their safety.

## Element 5: Inspect your farm

An effective farm safety system will include workplace inspections or "walkabouts" that focus attention on farm hazards. Walkabouts prevent accidents by finding hazards before they hurt someone.

### *Employer and Worker Roles*

Employers must regularly inspect any workplace they control. Many employers realize that workers are the most familiar with workplace hazards and designate workers and supervisors, after proper training, to carry out these inspections. Encourage everyone to regularly inspect his or her tools, equipment, and machinery. Everyone should carry out a "pre-operational safety check" before operating any machine.

### *Types of Inspections*

Inspect your workplace regularly using both formal, planned inspections and informal inspections. Both are integral parts of your health and safety farm program.

**Formal, planned inspections:** A formal, planned inspection is a *systematic examination* of the workplace. In this type of inspection you evaluate the safety of all work areas, tools, machinery, equipment, jobs and work procedures. You can also use inspections to protect your animals and ensure that things are working efficiently and profitably. In formal, planned inspections you would normally use a checklist to cover all areas thoroughly. The *Farm Safety Walkabout* on the next page is a formal inspection. To protect the health and safety of everyone on the farm (workers, supervisors, and your family), use it frequently and regularly.

**Informal inspections:** These inspections refer more to specific tasks or jobs. They include pre-operational safety checks on all tools, equipment, machinery and personal protective equipment (PPE) before starting a job. Workers, supervisors, and managers conduct informal inspections everyday.

You should know the safety hazards and the condition of every part on each piece of equipment you use. A pre-operational safety check, that is inspecting the equipment before starting out to work, helps ensure that you'll get the job done without a dangerous breakdown. Typical situations where a preoperational safety check is essential include: when you're using a tractor, loader, Power Take Off (PTO); when you're refueling or hitching a load; and when you're using farm equipment on the roads.

*Know your equipment.* Read the operator's manual. Review the location and purpose of all the gauges and controls so you can react quickly in an emergency. Find out the meaning and relevance of all the danger, warning and caution decals on your equipment and machines.

For more information about conducting inspections read the Saskatchewan Labour Publication: *Inspections, A Guide for Committees and Representatives.*

## Farm Safety Walkabout

The following checklist is a guide. For a more comprehensive checklist, obtain the *Farm Safety Audit* from IAREH at the University of Saskatchewan.

### *Tractor*

- ❑ Rollover protective structure used and seat belts installed
- ❑ All shields and guards (e.g., PTO) installed
- ❑ Proper hitching attachments (i.e., draw bar and safety chain) are used
- ❑ Hearing protection available (tractor cab or ear protection)

### *Vehicles, Tools, Machinery, etc.*

- ❑ Tools, machinery, equipment maintained
- ❑ Vehicles maintained
- ❑ Lockout mechanism available
- ❑ All shields and guards installed
- ❑ Hearing protection available
- ❑ Hydraulic hoses in good repair
- ❑ All warning decals and engine shut-off instructions visible
- ❑ Lights and wipers working
- ❑ "Slow Moving Vehicle" sign attached
- ❑ Brakes in good working order
- ❑ Battery in good condition
- ❑ Operator's platform clear of debris
- ❑ Visibility clear
- ❑ Fire extinguisher on machine

### *Fire Protection*

- ❑ Isolate all sources of ignition
- ❑ Extinguishers (full) in hazardous areas
- ❑ No smoking signs in hazardous areas
- ❑ Exits clearly marked in hazardous areas
- ❑ Proper electrical installation
- ❑ Flammable materials stored safely
- ❑ Fire emergency numbers listed near telephone
- ❑ Emergency fire plan posted

### *Orientation and Training*

- ❑ Workers trained in safety work procedures
- ❑ Workers receive adequate supervision
- ❑ Workers trained in proper lifting, moving and repositioning

### *Chemical Hazard & Biohazard Protection*

- ❑ Chemicals stored safely and labeled properly
- ❑ Biohazards identified and dealt with safely
- ❑ Warning signs posted
- ❑ Proper Personal Protective Equipment (PPE) available, such as eyewear and protective clothing, in good condition
- ❑ Emergency numbers posted

### *Other Emergency Preparation*

- ❑ Emergency plan posted
- ❑ Emergency numbers posted
- ❑ First aid supplies for all workplaces

### *Farm Buildings*

- ❑ Fire exits clear
- ❑ Aisles, stairs, ladders and floors uncluttered and in good repair
- ❑ Light and ventilation adequate
- ❑ Buildings free of hazardous materials
- ❑ Hazardous ladders/openings/protrusions guarded
- ❑ Toilet/waste disposal facilities adequate
- ❑ Electrical fixtures suitable

### *Farm Yard*

- ❑ Assigned play area for children away from work areas
- ❑ Protection from enclosed spaces such as cisterns, wells, manure pits, feed silos
- ❑ Protection from dugouts
- ❑ Grain bins located away from electrical hazards
- ❑ Identify and post all overhead power lines where high equipment (e.g., grain augers) is used

### *Work Environment*

- ❑ Adequate lighting and ventilation for the work tasks
- ❑ Protection from extremes of temperature

## *Element 6: Identify and control hazards*

Hazard identification and control is key to preventing workplace injuries on the farm. Do not underestimate the significance of common, everyday hazards.

### Everyday Hazards in the Agricultural Workplace

**Machines:** Machinery causes the most deadly injuries. The most hazardous machinery related tasks are:

- Transportation of family/workers (rollover, run over after falling may occur with tractors, trucks, all terrain vehicles, other farm equipment)
- Starting equipment/fueling up (bystander/operator run over, explosion)
- Using PTO (Power Take Off) driven implements (entanglement)
- Using farm equipment on public roadways (rollover, collision)
- Using machinery around power lines (electrocution), and
- Using loaders (electrocution, entanglement, crushing, falls)

**Noise:** Sustained exposure to high decibel noise produced by farm equipment and machinery can cause loss of hearing.

**Confined Spaces/Water Storage:** Manure pits, grain bins, septic tanks and other confined spaces are commonplace in agriculture (asphyxiation, poisoning). Dugouts, wells and cisterns are very hazardous.

**Chemical and Biological Hazards:** See page 20.

**Working at Heights:** (falls, electrocution).

**Working with Irritable, Protective or Hungry Animals:** (crushing, striking).

**Lifting, moving and repositioning:** Inappropriate lifting and moving of heavy objects or loads cause back injuries. Ergonomic injuries arise from poor posture/positioning and repetitive motion.

**Extreme Conditions of Weather, and Terrain:** These make injury more likely. Extreme temperatures can cause immediate and or long-term health problems.

**Working Alone or in Isolated Places:** These conditions may increase the risk of harm to the worker. Employers need to identify the risks to the worker in these situations and do what s he can to eliminate or reduce the risks.

***What's a hazard?***

Hazards are any things that can harm workers. There are health hazards and safety hazards.

**Health Hazards**

Think of a health hazard as any agent, situation, or condition that can cause an occupational illness. There are five types (look for each type during inspections):

1. **Chemical hazards**, such as battery acid, solvents and pesticides

2. **Biological hazards**, such as bacteria, viruses, dusts, and moulds. Biological hazards are often called "biohazards" (e.g., animal borne disease, mouldy hay, tetanus)

3. **Physical agents** (energy) strong enough to cause harm, such as electrical currents, heat, light, vibration, noise, and radiation

4. **Work design (ergonomic) hazards**, such as lifting, moving or repositioning of heavy loads

5. **Workplace stress**, such as stress associated with work shifts, workload, and harassment

A health hazard may produce serious and immediate (acute) affects, or cause long-term (chronic) problems. All or part of the body may be affected. Occupational illnesses occur when someone is exposed to a chemical or a biological substance, a physical agent, or other stressors that can harm them. Someone with an occupational illness may not recognize the symptoms immediately. For example, noise-induced hearing loss is often difficult for victims to detect until it is advanced and irreversible.

**Safety Hazards**

A safety hazard is anything that could cause a physical injury, such as a cut or fracture. Safety hazards cause harm when workplace hazard controls are not adequate. Remember to check the adequacy of controls during your inspections.

## A Hazard Control System

Using the following steps is a practical and effective way of controlling hazards. It can work for a "formal" or "informal" inspection. The steps are:

- Spotting known and potential workplace hazards
- Assessing or identifying the risk of these hazards, and
- Making the changes that will eliminate or control the hazard

### Step 1: Spot the Hazard

A hazard is any situation, activity, procedure, equipment or animal that *could harm someone*. When spotting hazards, focus on all farm tasks, equipment and substances. When listing hazards use:

- Common sense
- Information from past accidents, near accidents and other experiences
- Information from your family, employees, neighbours
- Product literature and information from suppliers.

Keep an eye out for hazards every day.

### Step 2: Assess the Risk

Next, determine the risk of harm for the hazard(s) you've spotted. The risk of harm is the chance (or likelihood) that the hazard will actually harm someone. Risk assessment mainly depends on two factors:

- The *likelihood* of an incident – Is it likely or unlikely to occur?
- The *severity* of the incident – Could it cause death, serious injury, or minor injury?

To assess the risk of a hazard hurting someone, ask questions like:

- How many people come in contact with the hazard?
- How often?
- How seriously could someone be harmed?
- How quickly could a dangerous situation come up if something goes wrong?

This will help you to decide which hazards should be taken care of immediately. Also, you can use this information to help you decide what to inspect, when to carry them out and how often.

The risk also depends on factors such as the physical and mental abilities of the individual (e.g., young operator), the weather and terrain (e.g., mud on a wet road), and how the equipment is used (e.g., working on uneven or hilly terrain).

Don't overlook low-risk hazards. They can also have fatal consequences.

### Step 3: Make the Change

There are several ways to control a hazard. Pick the way(s) that's reasonable and practical for the circumstances you face.

1. **Eliminate hazards** posed by equipment, animals, and the environment if at all possible. You could, for example, get rid of a faulty machine, sell a bull that is difficult to handle, put hilly terrain into pastureland rather than cultivate it.

2. **Substitute something safer** by using a different machine, material or work practice that poses less risk to perform the same task. For example, you could substitute a safer chemical for a hazardous chemical, or always use your safest tractor in steep terrain to minimize the risk of a rollover.

3. **Use engineering/design controls** when it's not possible to eliminate hazards or substitute safer materials or machinery. PTO and auger guards, rollover protective structures (ROPS) and brake locks are good examples of blocking controls used on farms. Design controls that isolate the worker/family from the hazard including childproof locks on pesticide sheds, fenced safe play areas away from the immediate work environment and locating grain bins away from electrical lines.

4. **Protect the workers** if other controls are inadequate. Protect workers through training, supervision, and personal protective equipment (PPE). For example, you should supervise new workers until you're sure they're competent to deal with hazardous situations. Use and provide proper clothes and masks for handling dangerous chemicals or biohazards. Ensure someone at the worksite is trained in giving first aid.

| Hierarchy of Control | | |
|---|---|---|
| **most preferred** | eliminate | remove from use |
| ↓ | substitute | use other machine, pesticide |
| ↓ | barriers/instructions | modify, repair, work procedure |
| **least preferred** | training<br>supervision<br>PPE | wear hearing protection, masks, goggles, gloves, etc. |

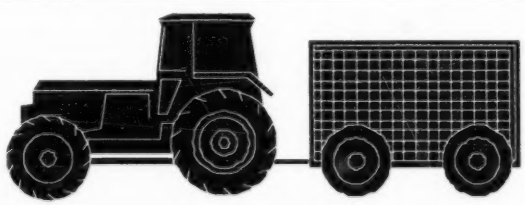
The most desirable step in making a farm environment safe is to eliminate the hazard. To adequately control hazards in many situations, however, several different types of controls may be needed.

## Using the Hazard Control System

Below are examples of how this system is used. Using tractors is a very dangerous farm task. Tractor hazards have a high risk of death or disabling injury.

### Tractor Hazard

| Spot the Hazard | Assess the Risk | Make the Change |
|---|---|---|
| **Extra riders on machinery** | Serious injury or death from falling off and being run over or otherwise injured | No extra riders |
| **Bystanders near machinery** | Serious injury or death from running over or pinning bystander | Install mirrors, improve sight lines, stop look and listen, keep children and spectators away from work area, check area before starting, install backup beeper |
| **Equipment in poor condition, jump starting** | Serious injury or death from run over after jump starting, from crushing injury caused by faulty hydraulics | Do regular maintenance, always do a pre-operational safety check. No jump starting |
| **High/poor hitching** | Serious injury or death from backwards rollover, rollover caused by a too heavy load for the tractor, going in the ditch, runaway loads | Never hitch above drawbar, use proper drawpin/clevis, extra weight for tractor front end, use engine for braking when going downhill with heavy load |
| **Front end loader improper, too large or too high** | Serious injury or death from large hay bale that can topple onto driver or bystander. Excess weight can cause rollover, particularly in uneven terrain; high bucket can result in contact with power lines | Ensure proper sized bucket for size of tractor, don't use manure bucket for moving large bales, use restraining devices or tines, drive with bucket low to the ground |
| **Unguarded PTO** | Serious injury or death from step over of PTO, starting of PTO, being entangled while performing repairs | Avoid PTO, use tight clothing, tie shoes, keep children from work area, disengage PTO where possible |
| **Ignition of fuel** | Death or injury from unanticipated combustion | Don't spill fuel on a hot engine, don't smoke near ignitable materials, don't refuel inside a building, keep children from work area, have fire extinguishers handy |



## *Element 7: Control chemical hazards and biohazards*

Everyone on the farm needs to know about chemical hazards and biohazards they may be exposed to on the farm. While hydrogen sulfide, silo gas, and carbon monoxide (generated by using equipment in shops) are examples of hazards typically encountered on the farm, there are a great number of chemical products, such as fertilizers and pesticides that can endanger the health of people exposed to them. Use the same steps to control these hazards.

### Spot the Hazard

Exposure to a chemical or biohazard might happen as:

- **an accidental exposure to the hazard** – spilling during storage, transport or disposal of a hazardous substance
- **a routine exposure to the hazard** – during the time a chemical or biological substance is applied or after application
- **an unforeseen exposure to the hazard** – for example, exposure to hantavirus, moulds or their spores, while cleaning a contaminated, enclosed area

Silos, manure pits and dugouts are work areas that can expose people to biological hazards. Risk caused by farm chemicals increases if containers are not labeled or are labeled improperly.

### Assess Risk

The health risks of chemical and biological hazards are often ignored because the effects may appear only after long-term exposure. The long-term consequences, however, can be severe and even deadly. Some chemicals, including anhydrous ammonia, and some viral agents, such as hantavirus, can be life-threatening.

Obtain information from suppliers (e.g., Material Safety Data Sheet [MSDS], product information), from health and regulatory authorities (e.g., hazard alerts, educational material), from neighbours and associations. MSDSs and labels are required by law for most hazardous products under Workplace Hazardous Materials Information System (WHMIS) requirements. Use this information to assess the risk.

### Make Necessary Changes

As the employer, you need to protect your workers from chemical and biological workplace hazards. The following steps are very important:

1. Keep an up-to date inventory of hazardous chemical and biological substances.
2. Use obtained information for training, to develop work procedures, and to conduct workplace monitoring and inspections.

3. Use safe work procedures and processes:

   - use personal protective equipment suitable for the job and store the PPE separate from chemical holding areas
   - know how to use the PPE and its limitations
   - lock chemical sheds and place them out of areas likely to flood
   - store chemicals in containers that cannot be mistaken for something else
   - don't store incompatible chemicals together
   - don't store explosives near detonators
   - follow manufacturers' recommendations and environmental requirements for disposal (e.g., triple rinsing)
   - secure hazardous substances during transport
   - assign responsibilities to those who order, purchase, receive and transport hazardous substances for ensuring that adequate hazard information is obtained
   - prepare for emergency spills, leaks or releases

   Develop emergency response procedures for any possible situation.

   Know and use the Workplace Hazardous Materials Information System (WHMIS). For additional information about how WHMIS applies to farmers read the Saskatchewan Labour publication *Workplace Hazardous Materials Information System (WHMIS) for Farmers*.

Where there is an infection hazard, you must examine the risk of infection and prepare an infection control plan. See Regulation 85 of *The Occupational Health and Safety Act and Regulations* for additional information.

## *Element 8: Prepare for farm emergencies*

You need to be ready to deal with medical emergencies in the workplace. To prepare for medical emergencies, develop an emergency plan and review it with everyone who might have to deal with an emergency. This will reduce confusion in a real emergeney. Review the plan with your local emergency responders.

Important parts of your emergency plan:

- **Listing Possible Emergencies:** Identify any emergencies that might occur, such as bad weather, fire or explosion, chemical spill, someone pinned by rollover while working alone, etc.
- **Provide a Communication System:** How will you know when persons need help? Consider providing two-way radios, phones or cellular phones for communication. Check in with your workers regularly through frequent visits or other means of contact.
- **Planning for Action:** Write out a plan for each potential emergency. Specify the role of each individual. As injured persons won't be able to carry out their roles in an emergency, list persons who can substitute for each role in your plan. For example, make sure everyone knows how to shut off machinery. Go over the plan with everyone involved.
- **Identifying Resources:** List everything needed to deal with possible emergencies in all areas of your farm. You should have adequate first aid supplies (restocked periodically) in all work locations and a way to call emergency help. Have emergency information, including directions to the farm, near a phone. Let local emergency service people know the best route to take to your farm.

Ensure that you have a way to evacuate a person who may be difficult to reach, for example, in a muddy field. Working in remote locations and alone is one of the greatest hazards in farming. Locating accident victims quickly and administering first aid on the scene can lessen the impact of an injury and greatly improve the chances of survival in some cases.

### Emergency Response Training

Several Saskatchewan organizations provide emergeney response and or first aid training for farm families as a public service, for a fee or as part of a course. Contact your health district, consult your local telephone directory for local first aid suppliers, or call the following organizations for details:

- Institute of Agricultural Rural and Environmental Health (IAREH) (306-966-6643)
- The Canadian Federation of Agriculture provides relevant farm emergency information on its website, www.cfa-fca.ca

## *Element 9:*
## *Investigate accidents and near accidents*

To investigate an *accident* or *near-accident*, you need to find out:

1. What caused the incident (immediate events leading up to the incident)?
2. What contributed to the incident (such as unsafe activities and conditions)?
3. The root causes that set the stage (such as inadequate safety policies, procedures, or attitudes).
4. Ways to prevent a similar incident.

Don't let evidence be disturbed. If necessary, take photographs of the incident scene or make drawings. Interview anyone who saw the incident or was involved. Use these six questions to get the basic information about the incident.

- *Who* was involved?
- *Where* did the incident happen?
- *When* did it happen?
- *What* were the immediate causes?
- *Why* did the incident happen (root cause)?
- *How* can a similar incident be prevented?

Factors to think about include:

- Inadequate planning, training, orientation or supervision (for example, repairing hydraulics on a front end loader without blocking the bucket)
- Poorly designed work areas or job procedures
- Inadequate, defective, or obsolete tools, machinery and equipment
- Unusual circumstances, such as an emergency that requires workers to perform jobs they normally don't do, and
- Jobs that are rarely performed (for example, silo repairs)

> Many accidents, which cause health problems such as back injury, carpal tunnel syndrome and eyestrain, will likely not be as obvious or "catastrophic" in appearance as many other types of accidents, such as rollovers, fires, etc.

For more information on the subject of investigations read the Saskatchewan Labour Publication: *Accident Investigations, A Guide for Committees and Representatives.*

## *Element 10:*
## *Make your farm a healthier and safer workplace*

Just as you review your other business activities, review your farm health and safety program regularly. Ask your workers to suggest improvements and help you detect and fix problems.

Agriculture work is always changing. New technologies and/or problems may require you:

- Re-examine workplace hazards
- Update supervisor worker training
- Change how supervising is done
- Reassign responsibilities for safety, and
- Review your workplace inspection procedure and conduct safety inspections differently

# Legislation

## *Using legislation to help prevent injury in the farm workplace*

Occupational Health and Safety legislation was written to help employers and workers deal with safety concerns. The following tables outline some of the regulations affecting agricultural workplaces. Consult the OH&S legislation for more details.

| Hazard | Legislative Requirement | Reference |
|---|---|---|
| **Machinery hazards** | ▪ Identify hazards for employees.<br>▪ Develop safe work procedures and strict dress codes (e.g., tight clothing/tied shoelaces).<br>▪ Guard contact points such as gears, PTO, cutting blades where possible.<br>▪ Develop lockout procedures to ensure power is not accidentally turned on during repair.<br>▪ Train workers.<br>▪ Inspect and maintain machinery regularly. | Regulations, Part X |
| **Powered mobile equipment** | ▪ Train operators and workers.<br>▪ Inspect and maintain equipment regularly.<br>▪ Develop safe work practices.<br>▪ Ensure required safety devices meet standards.<br>▪ Ensure employees are 16 years of age or older.<br>▪ Provide guards for PTO, lights and horn, runaway devices, wipers for cab, front and rear lights.<br>▪ Have Rollover Protection Structures (ROPS) on all machines.<br>▪ No riders unless they have a seat and seat belt. | Regulations, Part XI |
| **Confined spaces** | Develop a written plan to protect workers in each confined space they may enter.<br>▪ List the hazards and assess the risk.<br>▪ Inform workers of procedures.<br>▪ Train workers to work safely and to use rescue equipment.<br>▪ Ensure employees are 16 years of age or older.<br>▪ Test the atmosphere.<br>▪ Monitor the atmosphere.<br>▪ Provide rescue equipment and trained personnel. | Regulations, Part XVIII, and regulation 272 |

| Hazard | Legislative Requirement | Reference |
|---|---|---|
| **Chemicals and biohazards** | ▪ Maintain an inventory of potentially harmful chemical and biological substances.<br>▪ Obtain hazard information about these substances.<br>▪ Use the information to develop and implement safe work procedures and processes.<br>▪ Use the information to train workers about hazards and how to use required work procedures and processes.<br>▪ Reduce workplace contamination and prevent exposure to any extent that could be harmful.<br>▪ Provide Material Safety Data Sheets to workers.<br>▪ Develop a written plan to protect workers who are exposed to biohazards. Make your plan meet the requirements of the regulation. | Regulations, Part XXI, XXII, and regulation 303, 327<br><br>Regulation 85 |
| **Working alone or in isolated places of employment** | ▪ Identify and assess the risks of harm to your workers who must work alone or in isolated places.<br>▪ Take steps to eliminate or reduce those risks.<br>▪ Establish minimum standards of training and/or experience for workers in these situations.<br>▪ Establish an effective communications system.<br>▪ Keep in regular contact with workers working alone or in isolated places. | Regulation 35 |
| **Accumulations, spills of chemicals and biological substances** | If there could be an accumulation, spill, or leak of a hazardous chemical or biological substance at your workplace:<br>▪ Develop written emergency procedures to implement if an accumulation, spill, or leak happens.<br>▪ Ensure that competent persons, equipment, supplies, and personal protective equipment are available for the prompt, safe, and effective containment, neutralizing, and decontamination of any accumulation, spill or leak.<br>▪ Train each of your workers to implement any of the emergency procedures. | Part XXI, and regulation 310 |

| Hazard | Legislative Requirement | Reference |
|---|---|---|
| **Fire and explosion** | ▪ Provide, maintain and test fire extinguishers.<br>▪ Develop procedures for safe handling and transportation of flammable substances.<br>▪ Prohibit use of gasoline for cleaning or starting fires.<br>▪ Prevent accumulations of explosive substances, clear the work area if accumulations exceed limits.<br>▪ Develop safe work procedures for the installation, use and maintenance of compressed and liquefied gas systems. | Regulations, 359-374 |
| **Noise** | Identify noise hazards, assess risk, protect workers. | Regulations, Part VIII |
| **Lifting hazards** | Provide lifting equipment to reduce the need for hazardous manual lifts where smaller loads cannot be provided. | Regulation 78 |
| **Working at height** | Where a worker could fall and be injured (e.g., working on grain bins), install protective devices and/or require workers to use safe work practices and fall-arresting equipment. | Regulations, Part IX, regulations 115-127 |
| **Extreme temperature** | Control temperature or provide:<br>▪ shelters/heating equipment<br>▪ suitable clothing<br>▪ hot or cold drinks<br>▪ limited work schedule<br>▪ protection during travel | Regulation 70 |

| Protecting Safety | Legislative Requirement | Reference |
|---|---|---|
| **Inform workers about hazards at your workplace and their rights under the legislation** | Provide OH&S information to workers including their rights and responsibilities under the legislation. | Act, Part II; section 9(2) and regulations 15 and 18 |
| **Involve your workers in health and safety** | ▪ Set up an Occupational Health Committee (OHC) if your workplace has ten or more workers.<br>▪ Designate a worker occupational health and safety representative if your workplace has from five to nine workers.<br>▪ Consult your workers about health and safety issues if you don't require a committee or a representative. | Act, Part III and Part IV of the Regulations |
| **Provide training** | ▪ Train new employees and inexperienced workers in all matters necessary to protect their health and safety. Include everything listed in the regulation in your training.<br>▪ Provide training required by all programs, policies, procedures, and schedules required for your business. | Regulation 19<br><br>Regulation 22 |
| **Inspect your workplace regularly** | Have competent people regularly check and maintain your machinery, tools, equipment, vehicles, and so forth. Make sure your building is structurally sound. | Regulations 23 and 25 |

| Protecting Safety | Legislative Requirement | Reference |
|---|---|---|
| **Provide adequate general ventilation to protect workers from contaminants given off by the work** | Provide adequate ventilation with fresh, tempered outside air. Service regularly. | Regulation 64<br>Regulation 65<br>Regulations 66 and 67 |
| **Investigate and report accidents causing serious bodily harm** | Regulations require that you report accidents that result in hospitalization for 72 hours or more. You should also investigate reportable accidents and prepare a report. Send a copy to the OH&S Division if asked to by an officer. | Regulations, Part II; and regulations 8 and 29 |
| **Investigate and report dangerous occurrences** | ▪ You must report dangerous occurrences that could have injured a worker to the OH&S Division.<br>▪ Investigate dangerous occurrences and prepare a report containing the information required in the regulation. | Regulations 9 and 31 |
| **Prepare an emergency response plan** | Identify the personnel and resources, on and off the farm, that may be required in an emergency<br>▪ Identify possible emergencies<br>▪ Define the procedures for responding to each emergency<br>▪ Define the responsibilities of each person and train everyone<br>▪ Have a written plan<br>▪ Post it in appropriate locations | |

# Resources

## *Occupational Health & Safety Division publications and legislation*

You can download these publications from the Saskatchewan Labour website www.labour.gov.sk.ca. Alternately, contact Saskatchewan Labour's Occupational Health and Safety Division in Regina.

- Elements of An Occupational Health and Safety Program
- Safe Business is Smart Business
- Setting Up An Occupational Health and Safety Program, A Guide
- *The Occupational Health and Safety Act, 1993* and *The Occupational Health and Safety Regulations, 1996* (available from the Queen's Printer)
- Health and Safety Orientations: A Guide for Employers

## Farm safety publications

**Bulletins**

- Farmer Killed by Run Over
- Farmer Killed in Hydraulics Accident
- Jumpstarting Claims Another Victim
- Overhead Powerlines on Farm Yards

**Brochures/Booklets**

- All Terrain Vehicle Operation
- Anhydrous Ammonia Hazard Information for Farmers
- Confined Space on Farms
- Hydrogen Sulphide: The Deadliest Manure Gas
- Noise: Hazard Information for Farmers
- Pesticide Safety Handbook
- Tractor Safety
- Transferring and Transporting Liquid Manure
- Workplace Hazardous Materials Information System (WHMIS) for Farmers

## Websites of interest

**WorkSafe** www.worksafesask.ca

**WorkSafe Saskatchewan** is forming partnerships with Saskatchewan organizations and agencies to help prevent workplace illnesses and injuries by pooling programming, education and training resources. Saskatchewan Labour and the Saskatchewan Workers' Compensation Board are leading the initiative.

The WorkSafe Saskatchewan website is a collection of information designed to help employers and workers prevent injuries and illness in their workplace. The collection contains hundreds of documents on a wide variety of workplace issues. This collection is available on a CD-ROM – "WorkSafe Saskatchewan health and safety information for Saskatchewan employers, workers, and educators".

This safety collection has many benefits such as:

- a wide range of relevant topics, including hazard prevention information
- information from different perspectives and at different technical levels
- governing acts and regulations along with plain language explanations
- the ability to print, copy, save and redistribute text or graphics for use in safety manuals, health and safety policies and programs

The information in this collection can be used for:

- training
- safety meetings
- workplace inspections
- audits
- injury prevention procedures
- job safety analysis
- accident investigations
- maintenance checks
- disability management

This collection also contains useful information from the Canadian Centre for Occupational Health and Safety (CCOHS) and other notable Canadian and international contributors.

| Agency/Organization | Website |
|---|---|
| The American National Standards Institute (ANSI) | www.ansi.org/ |
| Canadian Association of Drilling Contractors (CAODC) | www.caodc.ca/ |
| The Canadian Centre for Occupational Health and Safety (CCOHS) | www.ccohs.ca/ |
| Canadian manufacturers' and suppliers' recommendations (MSDSs, supplier labels, users' guides, etc) | www.cma.org/ |
| The Canadian Standards Association (CSA) | www.csa.ca/ |
| Health Canada publications | www.hc-sc.gc.ca/hppb/srh/e_publications.html |
| The International Standards Organization (ISO) | www.iso.org/ |
| National Fire Prevention Act (NFPA) and the National Fire Code | www.nfpa.org/ |
| National Institute for Occupational Safety and Health (NIOSH) | www.cdc.gov/niosh/ |
| The Queen's Printer (Saskatchewan legislation) | www.qp.gov.sk.ca/ |
| Saskatchewan Labour | www.labour.gov.sk.ca |
| *Ready for Work* | www.readyforwork.sk.ca |
| Institute of Agricultural Rural and Environmental Health (IAREH) | www.usask.ca/medicine/agmedicine/iareh.html |
| Canadian Agricultural Injury Surveillance Program (CAISP) | meds.queensu.ca/~emresrch/caisp/ |
| WorkSafe Saskatchewan | www.worksafesask.ca/ |

Saskatchewan Labour
Occupational Health and Safety

**Regina Inquiry: 787-4496**
6th Floor,
1870 Albert Street
S4P 3V7
**Toll Free: 1-800-567-7233**

**Saskatoon Inquiry: 933-5052**
8th Floor,
122-3rd Avenue North
S7K 2H6
**Toll Free: 1-800-667-5023**

WorkSafe SASKATCHEWAN

www.labour.gov.sk.ca

www.worksafesask.ca